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BEFORE THE ARIZONA CORPORATION COMMISSION

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CHAIRMAN
JIM IRVIN
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COMMISSIONER

IN THE MATTER OF THE GENERIC PROCEEDINGS CONCERNING ELECTRIC RESTRUCTURING ISSUES.	Docket No. E-00000A-02-0051
IN THE MATTER OF ARIZONA PUBLIC SERVICE COMPANY'S REQUEST FOR VARIANCE OF CERTAIN REQUIREMENTS OF A.A.C. 4-14-2-1606	Docket No. E-01345A-01-0822
IN THE MATTER OF THE GENERIC PROCEEDINGS CONCERNING THE ARIZONA INDEPENDENT SCHEDULING ADMINISTRATOR	Docket No. E-00000A-01-0630
IN THE MATTER OF TUCSON ELECTRIC COMPANY'S APPLICATION FOR A VARIANCE OF CERTAIN ELECTRIC POWER COMPETITION RULES COMPLIANCE DATES	
ISSUES IN THE MATTER OF TUCSON ELECTRIC POWER COMPANY'S APPLICATION FOR A VARIANCE OF CERTAIN ELECTRIC COMPETITION RULES COMPLIANCE DATES	Docket No. E01933A-02-0069

NOTICE OF FILING TESTIMONY

Pursuant to Third Procedural Order on Track B (dated October 9, 2002), Tucson Electric Power Company ("TEP"), through undersigned counsel, provides notice that it has filed the Testimony of David Hutchens regarding TEP's Needs Assessment and Procurement Proposal, a copy of which is attached

Arizona Corporation Commission
DOCKETED

NOV 04 2002

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RESPECTFULLY SUBMITTED this 4th day of November, 2002.

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IN THE MATTER OF TUCSON ELECTRIC COMPANY'S APPLICATION FOR A VARIANCE OF CERTAIN ELECTRIC POWER COMPETITION RULES COMPLIANCE DATES	Docket No. E-01933A-98-0471
ISSUES IN THE MATTER OF TUCSON ELECTRIC POWER COMPANY'S APPLICATION FOR A VARIANCE OF CERTAIN ELECTRIC COMPETITION RULES COMPLIANCE DATES	Docket No. E01933A-02-0069

TESTIMONY OF DAVID HUTCHENS

ON BEHALF OF

TUCSON ELECTRIC POWER COMPANY

RE: NEEDS ASSESSMENT AND PROCUREMENT PROPOSAL

NOVEMBER 4, 2002

Q: Please state your name and employment position.

A: My name is David Hutchens. I am Manager of Wholesale Marketing for Tucson Electric Power Company.

Q: What are your job responsibilities at Tucson Electric?

A: I oversee the Wholesale Marketing department functions including wholesale gas & electricity procurement, resource management, risk management, marketing, scheduling and trading.

Q: Did you participate in the Track B workshops?

A: Yes. I have represented TEP in every workshop.

Q: What is the purpose of your testimony?

A: Pursuant to the "Third Procedural Order on Track B Issues", in Docket E-00000A-02-0051 *et al.*, TEP must "file a needs assessment and procurement proposal, sufficient to inform the Commission in its determination of the minimum amount of power, the timing, and the form of procurement as required by Decision No. 65154, together with supporting testimony, by noon on November 4, 2002." This testimony will provide that information.

Q: How is your testimony structured?

A: It discusses three areas: (i) Track B Workshop Background; (ii) TEP's needs assessments and associated background information and assumptions; and (iii) TEP's draft procurement proposal.

Q: Please summarize your testimony.

A: TEP's Contestable Load for purposes of the upcoming competitive solicitation is set forth in Exhibit 1. This Contestable Load factors in TEP's wholesale load and all of TEP's existing reliability must-run generation units. In the upcoming solicitation, TEP intends to issue requests for bids on a variety of energy products and ancillary services and will use the process generally described in the Commission Staff's October 25, 2002 Report.

TRACK B WORKSHOP BACKGROUND

Q: What has been TEP's involvement in the Track B Workshops?

A: TEP has actively participated in every Track B workshop. TEP has provided, and will continue to provide, relevant information and data about TEP's resources, loads and needs assessments in a timely manner to facilitate the group's discussions and agreement.

Q: What were the conclusions of key issues to TEP that were addressed and resolved to TEP's satisfaction in the Track B Workshops?

A: TEP believed that several key TEP-related issues were addressed and resolved in the workshops. Those issues were: (i) all of TEP's generation as of September 1, 2002, whether owned or leased, would be included in TEP's resources for the purpose of calculating the "Contestable Load", including the two new Reliability Must-Run ("RMR") Combustion Turbines ("CTs") added in 2001 (DeMoss Petrie & North Loop #4); (ii) TEP's wholesale load would be included in TEP's forecasted needs; (iii) TEP's contestable load would be as set forth in Exhibit 1; and (iv) TEP could have its wholesale marketing department involved in the solicitation process because TEP did not intend to bid during that process.

Q: How were these issues apparently resolved?

A: The agreement on these issues was dependent on the inclusion of TEP's wholesale load in calculating the contestable load. In short, the amount of Contestable Load represents a settlement of all these issues. TEP had contended early in the workshop process that the procurement of "any required power that cannot be produced from its own existing assets through the competitive procurement process as developed in the Track B proceeding"[1] should still provide the utility's management the discretion to create a diverse and balanced portfolio of energy purchases. This portfolio would include differing term and price structures as well as differing products and procurement timing that met the utility's procurement and risk management needs. With this view in mind, TEP had offered to include its wholesale load in the procurement process since TEP would have nothing to

[1] ACC Decision No. 65154, p. 33.

bid in the procurement process if it only included the retail load. This view was based on the assumption that "existing assets", as contemplated by Decision 65154, included all of TEP's assets as of the date of that Decision (September 10, 2002). In the second Staff Draft Solicitation Proposal, Staff recommended that two of TEP's existing Combustion Turbines (95 MW in total) installed as RMR units prior to the summer of 2001 should not be included TEP's existing resources. TEP therefore argued that its FERC-approved, Market-Based Tariff wholesale contracts should not be part of the load to be covered by this procurement process. Through discussion and compromise with the other parties in the workshop, TEP agreed to include its wholesale load as long as the two combustion turbines were included in TEP's existing resources and TEP's wholesale marketing department could be involved in the solicitation process.

Q: What did the October 25, 2002 Staff Report reflect concerning these TEP issues?

A: The October 25, 2002 Staff Report has taken the opposite side on every issue mentioned above, with the exception that wholesale load is still included in TEP's forecasted needs. In particular, Staff recommends that: (i) TEP's new RMR CTs should not be included in TEP's existing assets,[2] (ii) TEP's contestable load amount should be higher,[3] and TEP's wholesale marketing department should be precluded from participating in the solicitation process.[4]

Q: What is TEP's position on the Track B Workshop issues in light of the Staff Report?

A: In TEP's "Track B List of Issues for Hearing" (filed on October 1, 2002),TEP listed the above issues as unresolved due to their negotiated settlement nature and interdependence. TEP did this to reserve the right to change its position on any of the above issues if any others were modified. TEP further believes that the apparent resolution of the issues at the workshops was the correct resolution. However, given the Staff Report, TEP believes that we may be back to "square one" in resolving TEP's contestable load.

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[2] October 25, 2002 Staff Report, p. 6.

[3] Id., p. 7.

[4] Id., p. 19.

Q: Did TEP list other issues as unresolved in its "Track B List of Issues for Hearing"?

A: No. Throughout the Track B hearings TEP has remained flexible and open-minded with solving the issues related to implementing the solicitation process in a fair and timely manner. TEP remains committed to the solicitation process timeline and working with Staff and the other parties collectively to address the remaining issues.

TEP'S NEEDS ASSESSMENT

Q: What is the purpose of the "Needs Assessment"?

A: The "Needs Assessment" is intended to determine the "contestable load" for TEP. That load is what TEP must acquire through the competitive solicitation process. Pursuant to Commission Decision No. 65154, "Contestable Load" is what TEP "shall acquire, at a minimum, any required power that cannot be produced from its own existing assets, through the competitive procurement process as developed in the Track B proceeding." The Needs Assessment determines a contestable load for both capacity and energy.

Q: Please provide an overview of TEP's Needs Assessment Methodology.

A: TEP's Needs Assessment does several things. First, it identifies TEP's generation assets and quantifies the capacity of each asset. This analysis includes generation plant and purchase contracts. It also provides a forecast of the power that will be available from those assets. Second, the Needs Assessment determines the forecasted load and energy demand that TEP will face. Third, the Needs Assessment calculates the actual contestable load, i.e., what portion of TEP's load that will not be met in the future by its existing assets.

Q: Please provide an overview of TEP's needs assessment.

A: Exhibit 3 provides a general graphical representation of TEP's Loads and Resources Needs Assessment for 2003-2006. The top line of the graph represents TEP's forecast load, including retail, operating reserves and wholesale. The solid background areas represent the anticipated capacity of TEP's existing assets. The area shown as "System Shortages" in the graphs represents amount of capacity on the peak hour of each month that cannot be met with existing assets. Each graph further lists the amount of energy (in

GWh) that cannot be met with existing assets.

DETERMINATION OF EXISTING ASSETS

Q: What did TEP consider to be its existing assets in this assessment?

A: For purposes of the needs assessment study, only existing TEP generation assets and firm purchase contracts where considered available to serve its load obligations. Exhibit 4 lists TEP's existing generation assets and their related capacities, based on TEP's ownership interest in the specific generation facility. This exhibit also shows the amount of existing asset capacity by month used in the Needs Assessment. TEP's only existing firm purchase contract that is included in its resources for this study is its 110 MW Southern California Edison Exchange Agreement which is also included in Exhibit 4.

Q: Why are the two newer CT plants included as existing generation assets?

A: First, as discussed in the previous section, the inclusion these two CTs added in 2001 (DeMoss Petrie and North Loop #4) were discussed with all the parties at the Track B workshops. The amount of contestable load for TEP was determined and enumerated with all the parties in the workshop with these CTs counted as existing assets.

Q: Besides the discussions with the other parties in the workshop as to the inclusion of the CTs in TEP's existing assets, is there any other evidence supporting their inclusion?

A: Yes. In ACC Decision 65154 (Track A), dated September 12, 2002 the Commission Ordered TEP to cancel any plans to divest interests in generation assets. It further ordered "TEP to acquire, at a minimum, any required power that cannot be produced from its own existing assets through the competitive procurement process as developed in the Track B proceeding." In the same order, the Commission specifically identified that "[f]or the purposes of the competitive procurement process, the PWEC generating assets that APS may seek to acquire from PWEC shall not be counted as APS assets in determining the amount, timing, and manner of the competitive procurement."[5]

[5] ACC Decision No. 65154, p. 30.

Q: How does the reference to PWEC's plants infer inclusion of TEP's new CTs?

A: It was clear that the Commission and other parties to the Track A proceedings defined "existing assets" as all assets currently owned (or leased) by the utility and was intent on only excluding assets that may be added later.

Q: What was Staff's view of transferring existing assets in the Track A proceedings?

A: As set forth in the Track A Decision, "Staff recommends that the Commission should not allow asset transfer until it is convinced that the transfer is in the public interest."[6] Staff further goes on to state that transfer of assets is not in the public interest and that "no reliability must-run ("RMR") should be divested" and that "if a utility chooses to retain its assets, the Staff believes that the Commission should apply cost of service principles when setting rates."[7] TEP's two newer CTs are RMR units within TEP's load pocket and, although they are not in TEP's current rate-base, the addition of those RMR units has been in TEP's resource plans for over 10 years.

Q: How were the two CTs treated in Track A?

A: TEP was precluded from transferring the CTs and therefore treated as "existing assets" with the same meaning as used in Decision No.65154 referencing the competitive procurement process.

FORECASTED LOAD AND ENERGY DEMAND

Q: Please discuss TEP's Load Forecast used in the Needs Assessment.

A: TEP used its June, 2002 energy and demand forecast compiled by its forecasting group. A monthly summary of demand and energy forecast for the years 2003 to 2006 is provided as Exhibit 5.

Q: Does this forecast include wholesale contracts?

A: Yes. As previously discussed, the needs assessment includes all of TEP's wholesale load.

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[6] Id., p.11.

[7] Id.

Q: Please describe TEP's wholesale contracts included in the load forecast.

A: TEP has three wholesale contracts that are included in the "Wholesale Load" line on the Exhibit 3 and in the load demand forecast calculations in Exhibit 5. All three are sales agreements under TEP's Market Based Sales Tariff and include 100 MW sale of capacity and energy to SRP, a full-requirements capacity and energy sale to Navajo Tribal Utility Authority and a 60 MW sale to Phelps Dodge Energy Services.

TEP'S CONTESTABLE LOAD

Q: Please summarize the contestable load results.

A: Exhibit 1 provides the TEP's Contestable Load for 2003 through 2006 as discussed in the Track B workshop process and calculated using the above described process. TEP believes that this is the appropriate contestable load to use for the solicitation process.

Q: Are these the same numbers supplied to the parties in the Track B workshops?

A: Yes. In fact, both Exhibits 1 and 3 hereto had been provided to Staff and the other parties at the Track B workshops. Exhibit 1 is simply a tabulation of the data from the Exhibit 3 graphs.

Q: Does the Staff's October 25, 2002 Report on Competitive Solicitation reflect the same Contested Load for TEP?

A: No. Staff has changed the amount of TEP's contestable load that the parties discussed in the Workshop.

Q: Did Staff recognize the apparent agreement of the parties on the amount of TEP's contestable load?

A: Apparently not. TEP was under the impression that the Contestable Load, as presented in Exhibit 1, was accepted by all parties participating in the workshop. In particular, Staff did not list TEP's unmet needs as an area of dispute on Staff's issue list submitted on October 1, 2002. On the other hand, Staff did list APS's unmet needs as an area of dispute.

Q: How did the Staff Report change TEP's contestable load?

A: Staff did not include the RMR CTs added in 2001, discussed more fully above, as existing assets in calculating the contestable load. Further, Staff used a 40% capacity factor on these two RMR CTs in calculating the contestable load.

Q: Is a 40% capacity factor for these CT's accurate?

A: No. This is several times higher than TEP's forecast capacity of these units.

Q: Has TEP looked at what its contestable load would be without including the two new CTs?

A: Yes. After reading Staff's report, TEP ran its needs assessment again excluding the two newer RMR CTs as existing assets. Exhibit 2 shows the resulting amount of contestable energy by year based on the same forecast and assumptions.

Q: Does the exclusion of the two CTs from existing assets preclude TEP from bidding that capacity into the Solicitation?

A: No. However, as was discussed at length in the workshops, it unnecessarily complicates the bidding process. TEP is a single economic entity that owns both of the CTs in question. There is no affiliate involved with those units and there will be no rate impact if the units are included in the solicitation because TEP's rates are frozen through 2008. In fact, because the CTs are RMR units located within TEP's load pocket, it makes their capacity impossible to replace with other assets in the solicitation process. In order for TEP to "bid" this capacity and energy to itself, TEP would be required to set up a separate group at TEP to perform the solicitation activities as currently prescribed by Staff's report. It therefore creates a complicated bidding process that has no benefit to any party and does not affect the solicitation outcome in any way.

Q: Why would TEP require a separate group to perform the solicitation?

A: Staff's current report requires that TEP's Wholesale Marketing department be excluded from the procurement process. This is an unnecessary operational hurdle for TEP given the fact that this is the group that manages TEP's load and resources and has the best ability to evaluate TEP's needs and assess the solicitation bids. If this requirement is

imposed, it would increase TEP's costs by creating a duplicate department that will basically be conducting many of the same analyses and tasks.

Q: What did the parties in the Track B workshops agree to with respect to TEP's Wholesale Marketing department participating in the solicitation process?

A: In discussing the amount of contestable load, it was expressly agreed that TEP's Wholesale Marketing department would be allowed to conduct the solicitation.

Q: Was this a contested issue in the workshops?

A: No. To the contrary, there was not a single objection to TEP's request that its Wholesale Marketing department conduct the solicitation.

Q: Will the amount of contestable load change prior to TEP's solicitation?

A: TEP continually updates its Load and Resource forecasts throughout the year as the many factors underlying such a forecast are subject to frequent change. The Contestable Load numbers discussed herein represent an initial estimate by TEP. These numbers may change somewhat during the pre-solicitation section of the overall solicitation process. As fully recognized and discussed in the workshops, each utility must determine its contestable load in the pre-solicitation process with input from Staff and other parties.

TEP'S PROCUREMENT PROPOSAL

Q: Please describe the nature of TEP's Contestable Load

A: The nature of TEP's Contestable Load drives the structure of TEP's procurement proposal. TEP's proposed Contestable Load has very low load factors as shown in Exhibit 1. This is due primarily to the extreme seasonal variation in retail energy consumption. Further, daily and even hourly variation in load is tied to weather and can be extreme. It is also impossible to predict future days when TEP will actually require power in excess of its existing resources. All of these factors will negatively affect the economics of serving this load through a single type of forward contract. For example, if capacity is purchased ahead of time to meet the estimated peak hour shortage, the incremental cost associated with supplying the required power will be astronomical. On the other hand, if on-peak blocks of firm energy are purchased to completely meet the

estimated peak shortage hour, the operational ramp characteristics would be unmanageable and less expensive TEP resources would be displaced in a majority of the hours. It is also imprudent to leave all of TEP's required power needs to the spot market as the prices and availability of power vary significantly.

Q: Please provide an overview of TEP's procurement proposal.

A: With the factors discussed above in mind, TEP will procure a combination of different energy products and ancillary services to meet the contestable load. Currently, TEP envisions requesting bids for fixed price firm on-peak energy, fixed price firm super-peak energy, index-priced unit contingent capacity and energy, and non-spin ancillary service capacity. While Exhibit 1 provides the estimated total contestable load, TEP will provide further details during the solicitation process as to the preferred timing, duration, and quantity of each product desired. The amount of each product contracted will vary by month and year and will be determined after a least cost analysis of the bids are complete. TEP will require all of the energy procured to be deliverable at specific locations, consistent with TEP delivery capabilities, as delineated in the RFP.

Q: Why has TEP chosen this mix of products?

A: In order to manage the risks of volatile gas and power markets, TEP has chosen a combination of fixed-price and variable-price products that can be hedged to provide a reasonably stable power supply cost to TEP and its customers. TEP has also chosen different products (on-peak, super-peak, capacity and energy, reserves) to satisfy system ramp and operational constraints as well as economic considerations. TEP may further consider, with input from Staff, leaving a small portion of the Contestable Load to be filled in the short-term and spot markets with non-affiliated third parties.

Q: What is the timing of TEP's planned procurement?

A: TEP is primarily focused on the 2003-2006 timeframe but may accept bids for longer term agreements. Per Staff's current proposed timeline, deliveries will start by June 1, 2003.

Exhibit 1
TEP CONTESTABLE LOAD

Exhibit 2
TEP'S CONTESTABLE LOAD WITHOUT TWO NEWEST RMR CTS

Exhibit 1. TEP Contestable Load

Includes Two Newest RMR CTs in TEP's Existing Assets

	2003	2004	2005	2006
Capacity (MW)	**147**	**214**	**346**	**393**
Energy (GWh)	**14**	**14**	**57**	**58**

Includes Firm Wholesale Contracts as Load

Exhibit 2. TEP's Contestable Load without Two Newest RMR CTs

	2003	2004	2005	2006
Energy (GWh)	**50**	**46**	**120**	**104**

Includes Firm Wholesale Contracts as Load

Exhibit 3

2003 TEP LOADS/RESOURCES PEAK DEMAND FORECAST

Exhibit 3
2003 TEP Loads/Resources Peak Demand Forecast

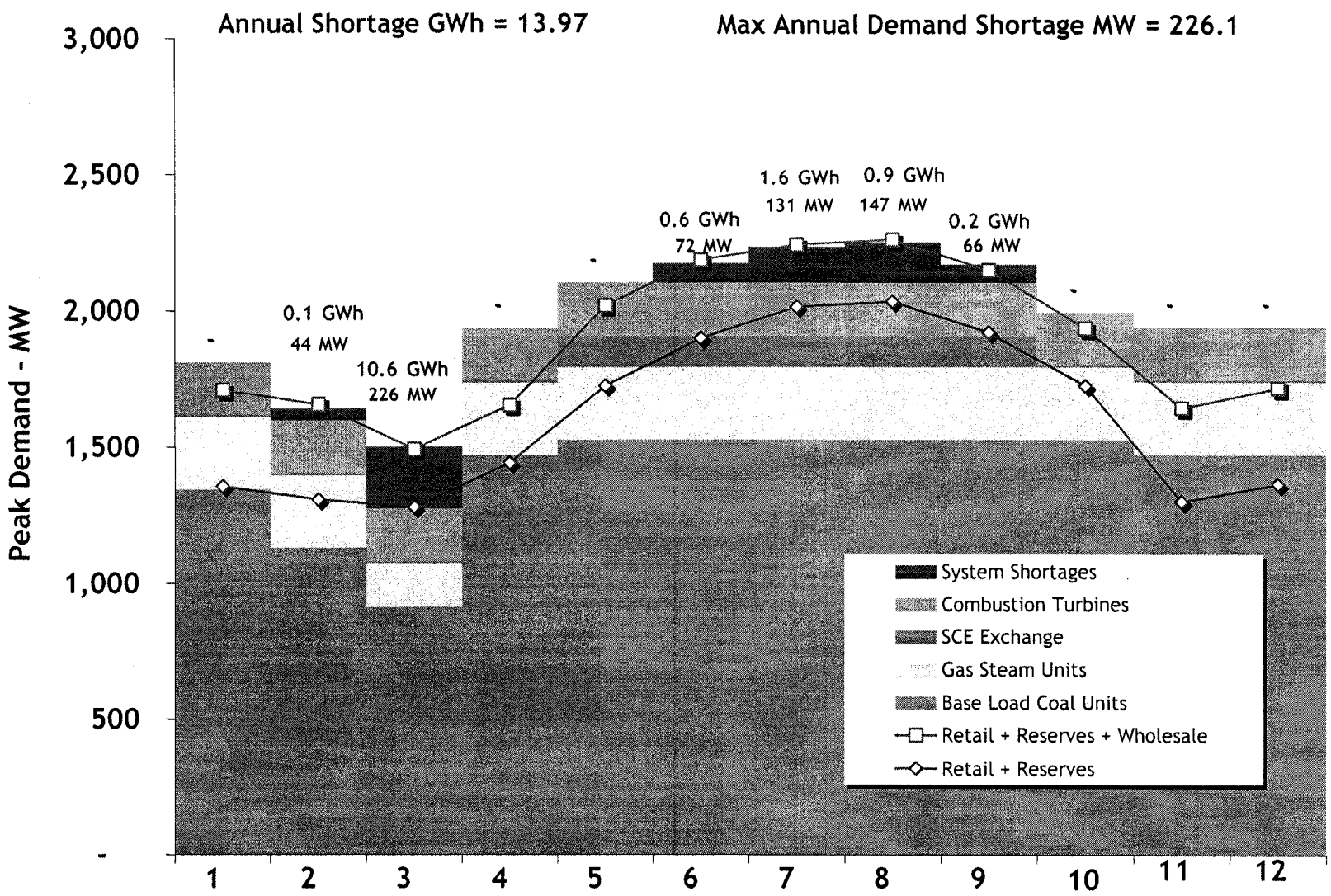

Exhibit 3 - page 2

2004 TEP Loads/Resources Peak Demand Forecast

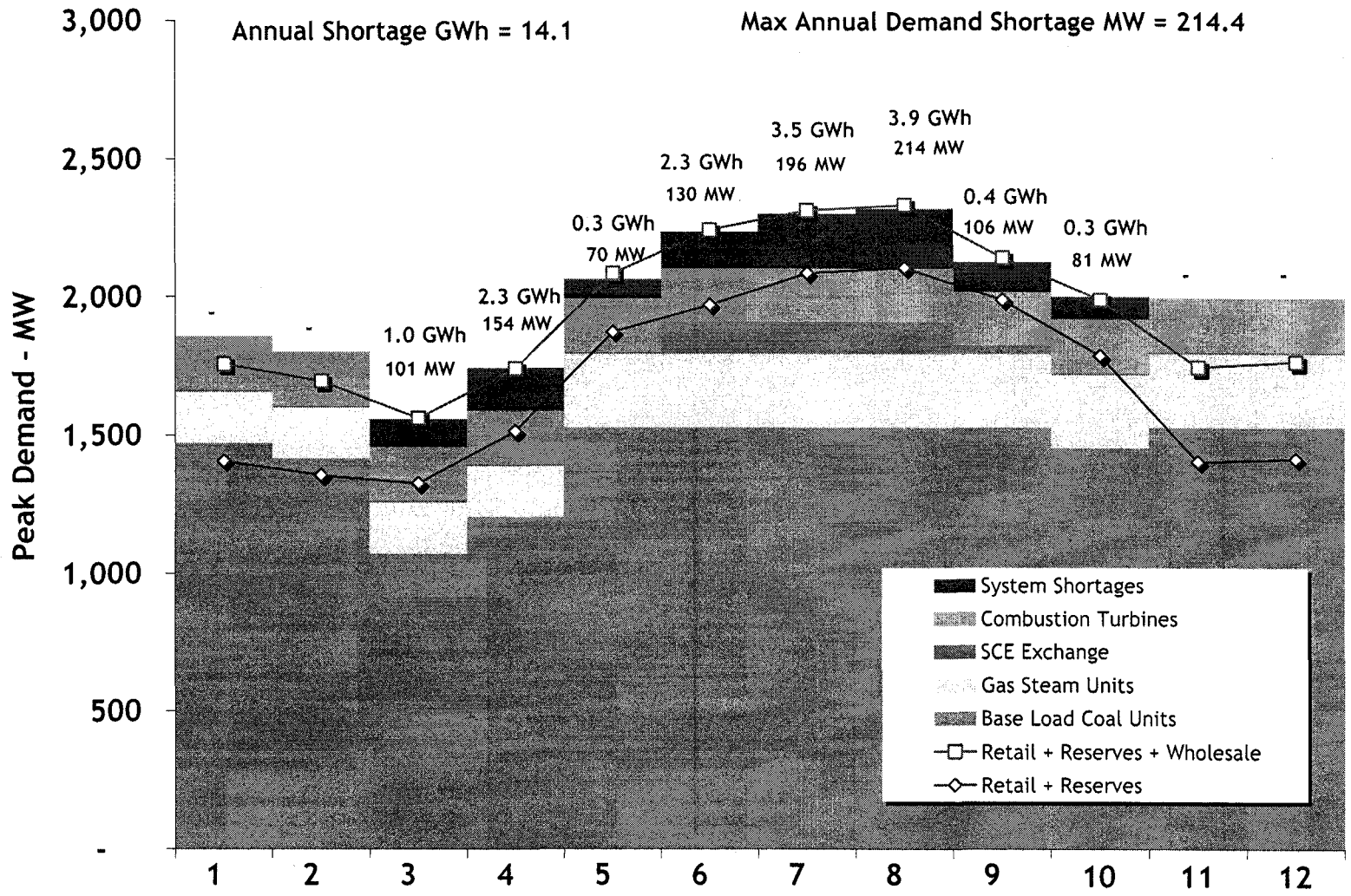

Exhibit 3 - page 3

2005 TEP Loads/Resources Peak Demand Forecast

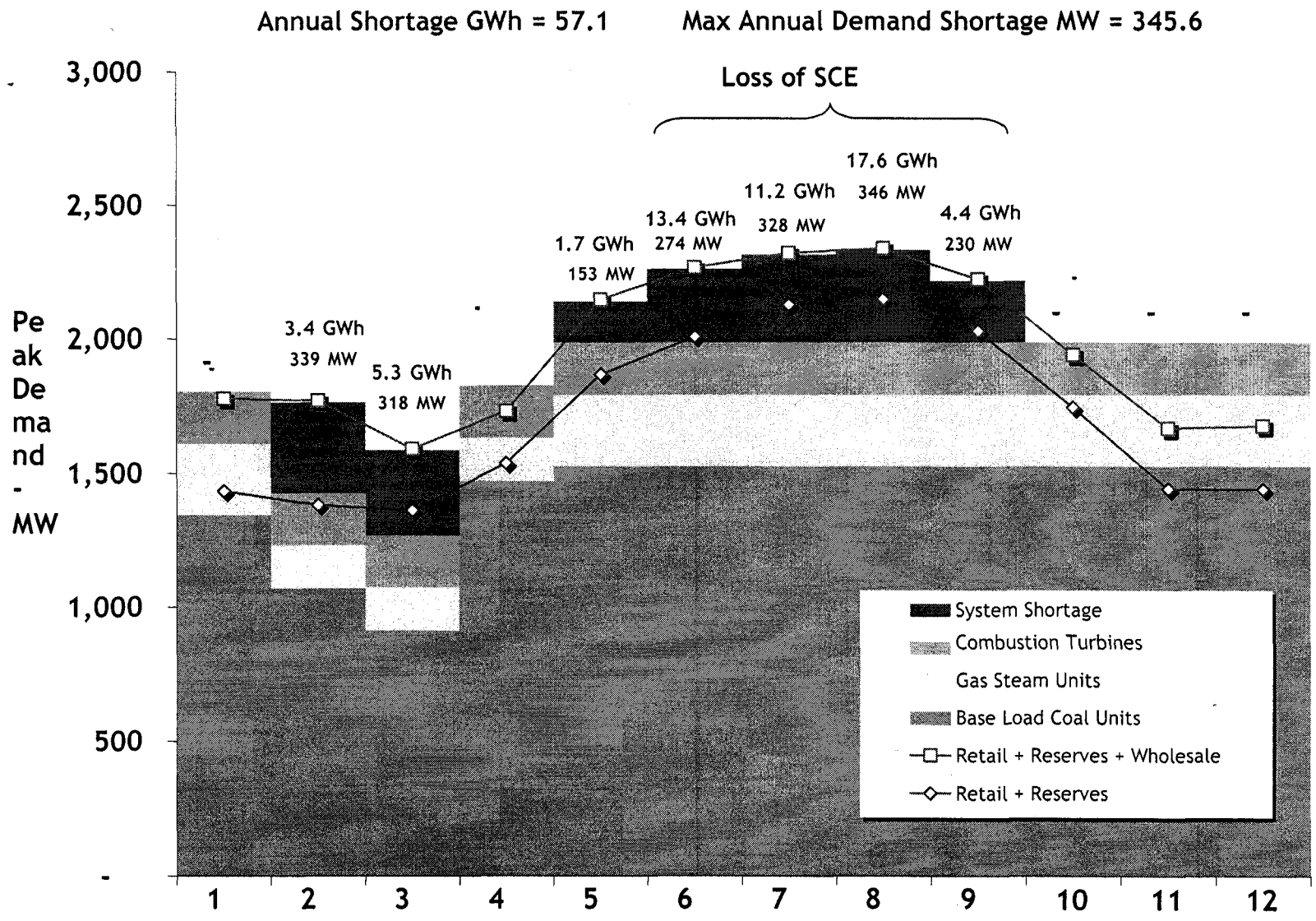

Exhibit 3 - page 4

2006 TEP Loads/Resources Peak Demand Forecast

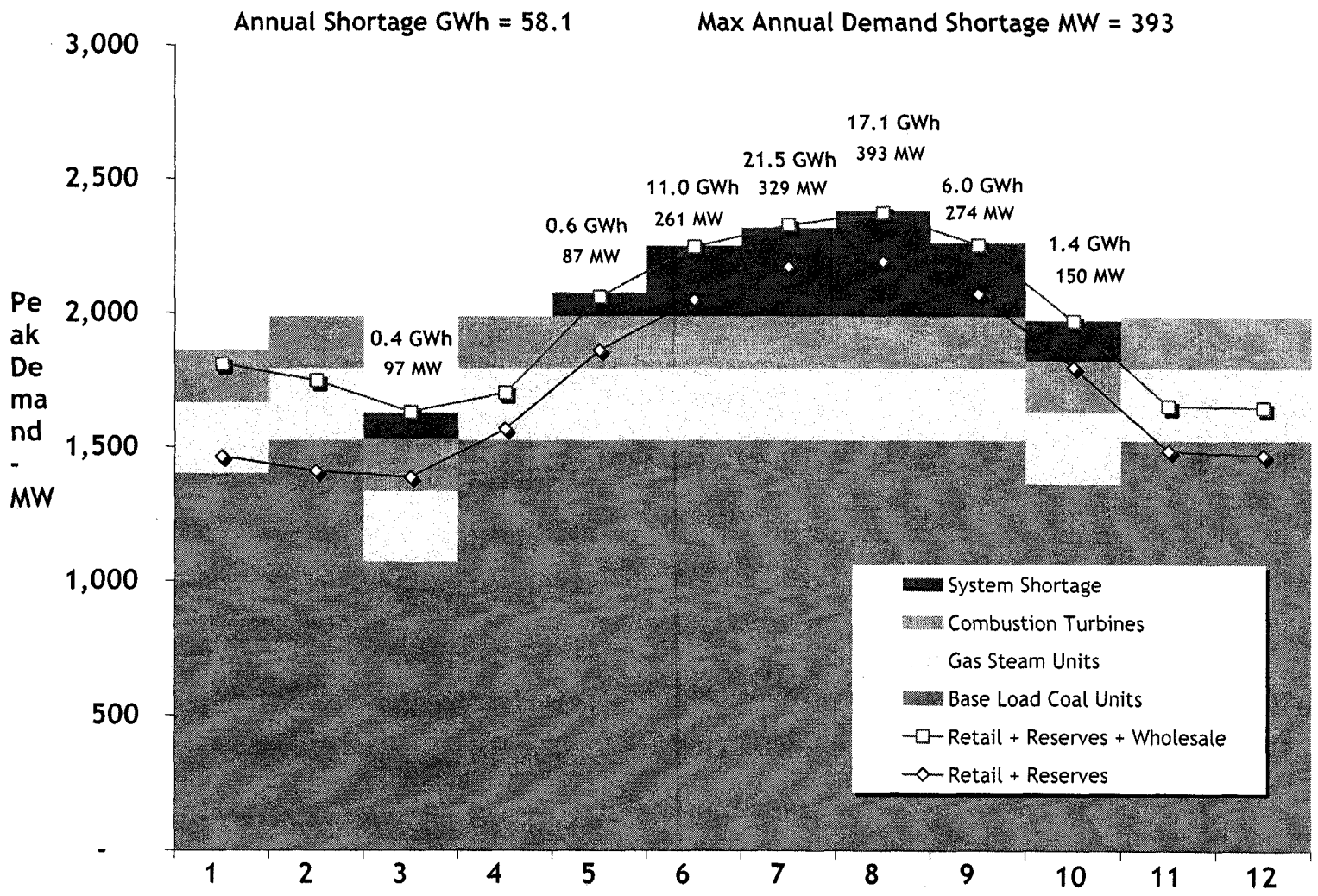

Exhibit 4
TEP RESOURCE INFORMATION

Exhibit 4. TEP Resource Information

2002 Generation Capacity	Capacity* (MW)	Unit Type
FOUR CORNERS 4	55.0	Coal Steam
FOUR CORNERS 5	55.0	Coal Steam
NAVAJO 1	56.3	Coal Steam
NAVAJO 2	56.3	Coal Steam
NAVAJO 3	56.3	Coal Steam
SAN JUAN 1	163.5	Coal Steam
SAN JUAN 2	158.0	Coal Steam
SPRINGERVILLE 1	400.0	Coal Steam
SPRINGERVILLE 2	400.0	Coal Steam
IRVINGTON 1	81.0	Gas Steam
IRVINGTON 2	80.5	Gas Steam
IRVINGTON 3	104.5	Gas Steam
IRVINGTON 4	125.0	Coal Steam
DEMOSS 1	67.5	Gas Turbine
NORTHLOOP CT 1	22.5	Gas Turbine
NORTHLOOP CT 2	22.1	Gas Turbine
NORTHLOOP CT 3	21.1	Gas Turbine
NORTHLOOP CT 4	18.9	Gas Turbine
IRVINGTON CT 1	21.5	Gas Turbine
IRVINGTON CT 2	22.1	Gas Turbine
Total Thermal Capacity	**1,987**	
SCE Exchange	110	Contract
Total Existing Capacity	**2,097**	

*Units based on operating capacities which account for spinning reserves and summer derations

2003 Peak Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Base Load Coal Units	1,344	1,130	911	1,469	1,525	1,525	1,525	1,525	1,525	1,525	1,470	1,470
Gas Steam Units	266	266	162	266	266	266	266	266	266	266	266	266
Combustion Turbines	196	196	196	196	196	196	196	196	196	196	196	196
Total Thermal	1,806	1,591	1,269	1,931	1,987	1,987	1,987	1,987	1,987	1,987	1,932	1,932
SCE					110	110	110	110	110			
Total Resources	1,806	1,591	1,269	1,931	2,097	2,097	2,097	2,097	2,097	1,987	1,932	1,932
2003 Unit Maintenance	(181)	(396)	(718)	(56)	(0)	(0)	(0)	(0)	(0)	(0)	(55)	(55)

2004 Peak Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Base Load Coal Units	1470	1414	1069	1200	1525	1525	1525	1525	1525	1361	1525	1525
Gas Steam Units	185	185	185	185	266	266	266	266	266	266	266	266
Combustion Turbines	196	196	196	196	196	196	196	196	196	196	196	196
Total Thermal	1851	1795	1450	1581	1987	1987	1987	1987	1987	1823	1987	1987
SCE					110	110	110	110	110			
Total Resources	1,851	1,795	1,450	1,581	2,097	2,097	2,097	2,097	2,097	1,823	1,987	1,987
2004 Unit Maintenance	(136)	(192)	(537)	(406)	(0)	(0)	(0)	(0)	(0)	(164)	(0)	(0)

2005 Peak Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Base Load Coal Units	1,344.00	1,069.00	911.00	1,470.25	1,525.25	1,525.25	1,525.25	1,525.25	1,525.25	1,525.25	1,525.25	1,525.25
Gas Steam Units	266.01	161.56	161.56	161.56	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01
Combustion Turbines	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57
Total Thermal	1806	1426	1268	1827	1987	1987	1987	1987	1987	1987	1987	1987
SCE												
Total Resources	1,806	1,426	1,268	1,827	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,987
2005 Unit Maintenance	(181)	(561)	(719)	(160)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

2006 Peak Capacity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Base Load Coal Units	1400.25	1525.25	1069	1525.25	1525.25	1525.25	1525.25	1525.25	1525.25	1361.75	1525.25	1525.25
Gas Steam Units	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01	266.01
Combustion Turbines	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57	195.57
Total Thermal	1862	1987	1531	1987	1987	1987	1987	1987	1987	1823	1987	1987
SCE												
Total Resources	1,862	1,987	1,531	1,987	1,987	1,987	1,987	1,987	1,987	1,823	1,987	1,987
2006 Unit Maintenance	(125)	(0)	(456)	(0)	(0)	(0)	(0)	(0)	(0)	(164)	(0)	(0)

Exhibit 5

TEP PEAK LOAD FORECAST DEMAND AND ENERGY

Exhibit 5. TEP Peak Load Forecast Demand and Energy

Monthly Peak Hour Demand (MW)

	2003	2004	2005	2006
JAN	1243	1286	1310	1335
FEB	1197	1238	1262	1286
MAR	1171	1211	1245	1266
APR	1329	1396	1416	1440
MAY	1608	1672	1706	1732
JUN	1767	1828	1864	1899
JUL	1880	1945	1982	2020
AUG	1890	1956	1993	2030
SEP	1789	1851	1886	1922
OCT	1601	1659	1631	1662
NOV	1187	1285	1307	1330
DEC	1248	1291	1316	1341
	1890	1956	1993	2030

Monthly Energy (GWh)

	2003	2004	2005	2006
JAN	661,188	694,640	728,308	766,668
FEB	576,735	614,267	627,459	647,917
MAR	617,950	645,161	667,976	715,979
APR	638,802	673,869	706,708	746,078
MAY	771,773	815,383	868,221	876,957
JUN	871,349	906,798	941,880	969,838
JUL	950,094	982,688	1,005,867	1,074,212
AUG	947,601	1,003,553	1,034,003	1,102,624
SEP	866,374	914,562	939,017	975,379
OCT	718,887	749,971	781,981	844,378
NOV	622,034	651,401	670,174	708,817
DEC	667,700	698,771	740,352	769,008
	8,910,485	9,351,063	9,711,946	10,197,855

Note: Includes Retail & Wholesale load